UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,423	01/26/2004	Takahiro Aoki	042046	4551

38834 7590 06/06/2007

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER	
CUNNINGHAM, GREGORY F	
ART UNIT	**PAPER NUMBER**
2624	

MAIL DATE	DELIVERY MODE
06/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/763,423	AOKI ET AL.	
	Examiner	Art Unit	
	Greg F. Cunningham	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to communications of application received 1/26/2004.

2. The disposition of the claims is as follows: claims 1 - 20 are pending in the application. Claim 1 is the only independent claim.

3. The group and/or Art Unit location of your application has changed. To aid in the correlation of any papers for this application, all further correspondence should be directed to Group Art Unit 2624 (effective 05/07). Please be sure to use the most current art unit number on all correspondence to help us route your case and respond to you in a timely fashion.

4. When making claim amendments, the applicant is encouraged to consider the references in their entireties, including those portions that have not been cited by the examiner and their equivalents as they may most broadly and appropriately apply to any particular anticipated claim amendments.

Specification

5. The abstract of the disclosure is objected to because of the use of "etc." in the second line of abstract. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claims 1-20 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

For example claim 1 uses the following terms: "a camera for capturing....", "to be captured" and "can be". Furthermore the image capture apparatus never actually captures an image, but merely alludes to capture at some time in the future via the verb "to be". (Examiner's note: Suggest using, for example of the first element, 'a camera that captures image data of an object').

9. Claims 1 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. Claim 1 recites the limitation "the image" in line 13. There is insufficient antecedent basis for this limitation in the claim. The term "the image" causes ambiguity with reference to previous mentioned terms "recorded image" and "image data".

B. Claim 12 is ambiguous with regard to "obtained", does this mean captured?; and "reverse order", does this mean reverse captured order pertaining to Applicant's figure 14?

10. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: related to the last element of claim 1 at" wherein said image data can be obtained by placing the object to be captured above the camera and the illumination". What causes initiation the obtaining or capture of said image data? If it is just the placement of the object and the illumination, then this element should indicate obtaining is "automatically" performed by a processor or a process unit. Otherwise, amend to indicate what initiates obtaining.

For example merely placing a document over a scanner or copy machine does not cause it to start it processes. Even with automatic feed, the system still needs initiated by a switch or command.

Furthermore, as indicated supra, "can be obtained", image data is never actually obtained, it merely can be.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-5, 7-10 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Sharman (US 5,686,210).

A. Sharman discloses claim 1, "An image capture apparatus, comprising:

a camera for capturing image data [col. 2, lns. 6-11; col. 3, lns. 60-67] of an object to be captured [col. 3, lns. 60-67 wherein photodiode 18 corresponds to camera; col. 5, lns. 61-63 wherein detector 56 corresponds to camera];

an illumination illuminating the object to be captured using a plurality of wavelengths [col. 2, lns. 23-24; col. 3, lns. 41-59; col. 5, lns. 46-54; col. 7, lns. 3-10: reflection techniques; col. 11, ln. 59 – col. 12, ln. 60: comparing print materials (reflectance); col. 7, lns. 40-67];

a storage unit storing a recorded image of an object to be captured [col. 4, lns. 5-16; col. 5, lns. 61-66];

a comparison-determination unit comparing the recorded image with obtained image data of the object to be captured and determining whether or not the image and the data match each other [col. 4, lns. 20-24 and col. 7, lns. 3-10: reflection techniques; col. 5, lns. 31-38 wherein all references to 'ratio' corresponds to "comparison"; col. 2, lns. 17-18; col. 4, lns. 20-24; col. 5, lns. 31-38];

and a material determination unit determining the material of the object to be captured from the image of the object to be captured which has been obtained using the plurality of wavelengths, wherein said image data can be obtained by placing the object to be captured above the camera and the illumination [col. 8, lns. 45-50; col. 13, lns. 24-35]" [as detailed].

B. Sharman discloses claim 2, "The apparatus according to claim 1, wherein said illumination has a plurality of light sources having intensity peaks of different wavelengths, switches these light sources, and obtains an image of the object to be captured using the plurality of wavelengths [For at least: col. 2, lns. 23-24; col. 3, lns. 41-59; col. 5, lns. 46-54; col. 7, lns. 3-

10: reflection techniques; col. 11, lns. 59-60: comparing print materials (reflectance); col. 8, lns. 45-50; col. 13, lns. 24-35]" supra for claim 1 and [as detailed].

C. Sharman discloses claim 3, "The apparatus according to claim 1, wherein said illumination has a light source emitting light of a continuous range of wavelengths, and when the camera captures an image, an image of a specific wavelength is obtained using a filter [col. 4, lns. 42-45, wherein 'lamp' corresponds to "illumination has a light source emitting light of a continuous range of wavelengths" and 'dichroic filters' corresponds to "filter"]" supra for claim 1 and furthermore [as detailed].

D. Sharman discloses claim 4, "The apparatus according to claim 1, further comprising: a brightness correction unit correcting a difference in brightness of illumination of light between different wavelengths on the object to be captured [col. 4, lns. 34-45]" supra for claim 1 and furthermore [as detailed].

E. Sharman discloses claim 5, "The apparatus according to claim 4, wherein said brightness correction unit comprises a brightness correction table storing a correction coefficient for correction of brightness [col. 4, lns. 34-41, wherein 'linear mask and/or matrix' corresponds to "correction table"]" supra for claim 4 and furthermore [as detailed].

F. Sharman discloses claim 7, "The apparatus according to claim 1, wherein material determination is performed on the object to be captured using a part of an image of the object to be captured" supra for claim 1, wherein only a 'part of the spectrum' is used as indicative of the LED's (wavelengths) employed rather than a full spectrum corresponds to "a part of an image of the object"

G. Sharman discloses claim 8, "The apparatus according to claim 1, wherein as a result of the material determination, information about a capturing operation in which a different material is detected is stored when the material of the object to be captured is determined to be different from a predetermined material [col. 4, ln. 17 – col. 6, ln. 2, wherein 'kodachrome' and 'ektachrome' correspond to "different materials"; wherein 'and passed to A/D converter 58 for storage' corresponds to "information about a capturing operation"; and/or in col. 10, ln. 46 – col. 11, ln. 2, wherein 'any values which are very different are rejected and a new average computed' corresponds to "different materials" and 'the scores are compared and the highest score identifies the material which is then displayed on LCD 136' corresponds to "information about a capturing operation"]", supra for claim 1 and [as detailed].

H. Sharman discloses claim 9, "The apparatus according to claim 1, wherein an image obtained using one wavelength emitted by the illumination is compared with the recorded image [col. 4, lns. 8-19]" supra for claim 1 and furthermore [as detailed].

J. Sharman discloses claim 10, "The apparatus according to claim 1, further comprising: a monitor unit indicating to a user a state in which the object to be captured is held [col. 10, ln. 64 – col. 11, ln. 2, wherein 'LCD 136' corresponds to "monitor unit" and 'appropriate message is displayed' corresponds to "a state in which the object to be captured is held"]" supra for claim 1 and [as detailed].

K. Sharman discloses claim 15, "The apparatus according to claim 1, wherein a standard reflecting object is captured together with the object to be captured to correct a difference in brightness of the object to be captured and illuminated by light having different wavelengths [col. 1, lns. 50-62, wherein 'standard AA red filter' and 'control system for photographic colour

printers and operates in a similar way to the method described above' correspond to "standard reflecting object"]" supra for claim 1 and furthermore [as detailed].

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sharman as applied to claim 1.

A. Sharman discloses claim 11, "The apparatus according to claim 1, wherein image data are obtained using different wavelengths between an even-numbered row and an odd-numbered row of a scanning line of an image obtained by said camera [col. 6, ln. 43 – col. 7, ln. 10, wherein 72' and 72" corresponds to "an even-numbered row and an odd-numbered row of a scanning line of an image" or visa-versa and 'by using other wavelengths in the visible and near infrared' corresponds to "different wavelengths"]" supra for claim 1 and [as detailed].

While although Sharman is not explicit with "an even-numbered row and an odd-numbered row of a scanning line of an image for different wavelengths", it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply brightness correction unit disclosed by Sharman in combination with items 72' and 72" corresponding to "an even-numbered row and an odd-numbered row of a scanning line of an image" or visa-versa

and 'by using other wavelengths in the visible and near infrared' corresponding to "different wavelengths" as disclosed by Shaman.

15. Claims 6, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharman as applied to claims 4 and 1, respectively, above, and further in view of Ishiguro, (US 6,029,015).

A. Sharman discloses claim 6, "The apparatus according to claim 4, further comprising: a distance sensor measuring a distance to the object to be captured, wherein said brightness correction unit comprises a brightness correction table storing a correction coefficient for correction of brightness for each distance to the object to be captured" supra for claim 4.

However, Sharman does not appear to disclose "further comprising: a distance sensor measuring a distance to the object to be captured, wherein said brightness correction unit comprises a brightness correction table storing a correction coefficient for correction of brightness for each distance to the object to be captured", but Ishiguro does in col. 6, lns. 36-67.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply brightness correction unit disclosed by Sharman in combination with correction table according to distance disclosed by Ishiguro, and motivated to combine the teachings because it would provide for the quantity of flash illumination light forming a proportion of at least 30% of the quantity of light necessary for proper film exposure regardless of subject distances, in close up shots in which a subject fills most of the frame, the brightness of the subject is enhanced as revealed by Ishiguro in col. 2, lns. 1-9.

B. Sharman discloses claim 13, "The apparatus according to claim 1, further comprising: a brightness correction unit having a brightness correction table storing a correction coefficient for

correction of brightness to correct a difference in brightness of light between different wavelengths emitted to the object to be captured" supra for claim 1.

However, Sharman does not appear to disclose "further comprising: a brightness correction unit having a brightness correction table storing a correction coefficient for correction of brightness to correct a difference in brightness of light between different wavelengths emitted to the object to be captured", but Ishiguro does in col. 6, lns. 36-67, whereby 'strobe light' corresponds to multiple and different wavelengths.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply brightness correction unit disclosed by Sharman in combination with correction table according to distance disclosed by Ishiguro, and motivated to combine the teachings because it would provide for the quantity of flash illumination light forming a proportion of at least 30% of the quantity of light necessary for proper film exposure regardless of subject distances, in close up shots in which a subject fills most of the frame, the brightness of the subject is enhanced as revealed by Ishiguro in col. 2, lns. 1-9.

C. Sharman discloses claim 14, "The apparatus according to claim 13, wherein said brightness correction table is generated by comparing data obtained when said image capture apparatus performs a first operation with recorded data using the obtained data when similarity is within a predetermined range" supra for claim 1.

However, Sharman does not appear to disclose "wherein said brightness correction table is generated by comparing data obtained when said image capture apparatus performs a first operation with recorded data using the obtained data when similarity is within a predetermined

range", but Ishiguro does in col. 6, lns. 36-67, whereby 'distances are divided into four ranges' corresponds to when similarity is within a predetermined range.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply brightness correction unit disclosed by Sharman in combination with correction table according to distance ranges disclosed by Ishiguro, and motivated to combine the teachings because it would provide for the quantity of flash illumination light forming a proportion of at least 30% of the quantity of light necessary for proper film exposure regardless of subject distances, in close up shots in which a subject fills most of the frame, the brightness of the subject is enhanced as revealed by Ishiguro in col. 2, lns. 1-9.

16. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sharman as applied to claim 1, and further in view of Fujioka, (US 5,751,446).

A. Sharman discloses claim 12, "The apparatus according to claim 1, further comprising: an image buffer storing an obtained image, wherein image data is obtained first for material determination, image data only required for the material determination is stored, image data for comparison with the recorded image is obtained, and image data is obtained in a reverse order, thereby setting memory requirements for an image buffer smaller than an amount of data which can be stored in the image buffer" supra for claim 1.

However, Sharman does not appear to disclose "an image buffer storing an obtained image, wherein image data is obtained first for material determination, image data only required for the material determination is stored, image data for comparison with the recorded image is obtained, and image data is obtained in a reverse order, thereby setting memory requirements for an image buffer smaller than an amount of data which can be stored in the image buffer", but

Fujioka does in col. 7, lns. 52-65, wherein 'memory addresses (B+C)/2 to B are sequentially reduced in the reverse order' corresponds to "image data is obtained in a reverse order".

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply brightness correction unit disclosed by Sharman in combination with memory addresses (B+C)/2 to B are sequentially reduced in the reverse order disclosed by Fujioka, and motivated to combine the teachings because it would provide for a reduction of 50% as revealed by Fujioka in col. 7, ln. 51.

17. Claim 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharman as applied to claim 1, and further in view of Bulman et al., (US 2003/0051255 A1), hereinafter Bulman.

A. Sharman discloses claim 16, "The apparatus according to claim 1, further comprising a network communications function" supra for claim 1.

However, Sharman does not appear to disclose "further comprising a network communications function", but Bulman does in [para. 0038, 0118 and 0267].

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply brightness correction unit disclosed by Sharman in combination with Internet network disclosed by Bulman, and motivated to combine the teachings because it would provide for remote access and image retrieval as disclosed by Bulman in [para. 0023].

B. Sharman discloses claim 17, "The apparatus according to claim 16, wherein the recorded image and wavelength characteristic of the recorded image are recorded in the apparatus connected over a network, or the recorded image and the wavelength characteristic of the recorded image are updated at an instruction from the apparatus" supra for claim 16.

However, Sharman does not appear to disclose "wherein the recorded image and wavelength characteristic of the recorded image are recorded in the apparatus connected over a network, or the recorded image and the wavelength characteristic of the recorded image are updated at an instruction from the apparatus", but Bulman does in [para. 0038, 0118 and 0267].

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply brightness correction unit disclosed by Sharman in combination with using the Internet network for electronic delivery disclosed by Bulman, and motivated to combine the teachings because it would provide for remote access and image retrieval as disclosed by Bulman in [para. 0023].

C. Sharman discloses claim 18, "The apparatus according to claim 16, wherein in network communications, encrypted data are communicated" supra for claim 16.

However, Sharman does not appear to disclose "wherein in network communications, encrypted data are communicated", but Bulman does in [para. 0038, 0118 and 0267].

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply brightness correction unit disclosed by Sharman in combination with Internet network and encryption disclosed by Bulman, and motivated to combine the teachings because it would provide for remote access and image retrieval as disclosed by Bulman in [para. 0023].

D. Sharman discloses claim 19, "The apparatus according to claim 1, further comprising: an external storage medium access unit reading data from an external storage medium, wherein the recorded image and wavelength characteristic of the recorded image are recorded and updated from the external storage medium" supra for claim 1.

However, Sharman does not appear to disclose "further comprising: an external storage medium access unit reading data from an external storage medium, wherein the recorded image and wavelength characteristic of the recorded image are recorded and updated from the external storage medium", but Bulman does in [para. 0038, 0118 and 0267, wherein Internet network corresponds to "external storage medium"].

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply brightness correction unit disclosed by Sharman in combination with Internet network (external storage medium) disclosed by Bulman, and motivated to combine the teachings because it would provide for remote access and image retrieval as disclosed by Bulman in [para. 0023].

18. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sharman as applied to claim 1, and further in view of Enright et al., (US 6,583,813 B1), hereinafter Enright.

A. Sharman discloses claim 20, "The apparatus according to claim 1, further comprising: a peripheral image capture camera capturing a state of a surrounding area when the object to be captured is taken" supra for claim 1.

However, Sharman does not appear to disclose "further comprising: a peripheral image capture camera capturing a state of a surrounding area when the object to be captured is taken", but Enright does in [col. 39, lns. 22-32].

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply brightness correction unit disclosed by Sharman in combination with capturing image data related to users, documents, surroundings disclosed by Enright, and

motivated to combine the teachings because it would provide for remote notification and conditions occurring as disclosed by Enright in [col. 3, lns. 58-60].

Responses

19. Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231.

Inquiries

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory F. Cunningham whose telephone number is (571) 272-7784.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matt Bella can be reached on (571) 272-7778. The Central FAX Number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

G. F. Cunningham

Matthew C. Bella

Gregory F. Cunningham
Examiner, Art Unit 2624

gfc

6/01/2007

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600